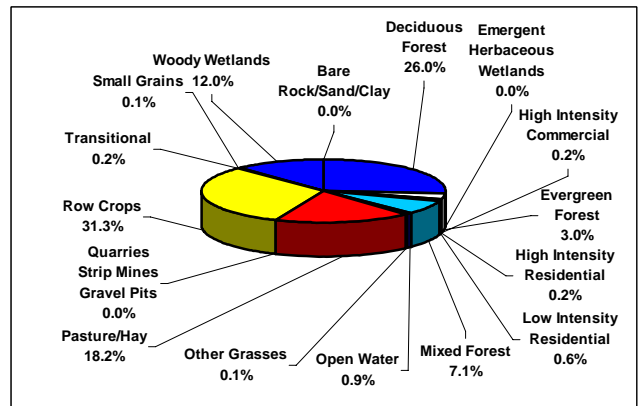


## Summary – Lower Hatchie River Watershed (08010208)

In 1996, the Tennessee Department of Environment and Conservation Division of Water Pollution Control adopted a watershed approach to water quality. This approach is based on the idea that many water quality problems, like the accumulation of point and nonpoint pollutants, are best addressed at the watershed level. Focusing on the whole watershed helps reach the best balance among efforts to control point sources of pollution and polluted runoff as well as protect drinking water sources and sensitive natural resources such as wetlands. Tennessee has chosen to use the USGS 8-digit Hydrologic Unit Code (HUC-8) as the organizing unit.



*Land Use Distribution in the Tennessee Portion of the Lower Hatchie River Watershed.*

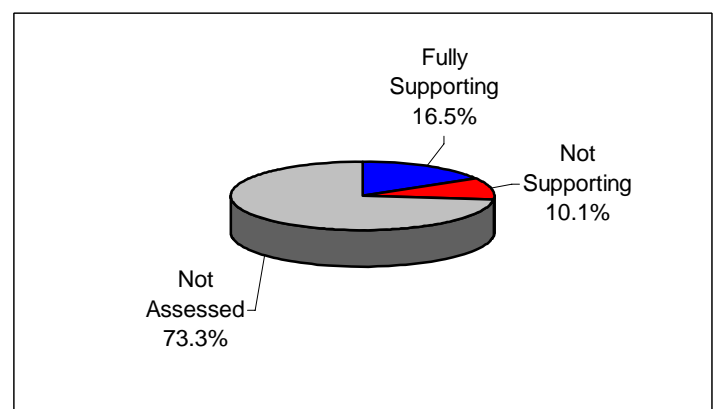
The Watershed Approach recognizes awareness that restoring and maintaining our waters requires crossing traditional barriers (point vs. nonpoint sources of pollution) when designing solutions. These solutions increasingly rely on participation by both public and private sectors, where citizens, elected officials, and technical personnel all have opportunities to participate. The Watershed Approach provides the framework for a watershed-based and community-based approach to address water quality problems.

One state forest, one state park, one wildlife management area, one state historic area, one state scenic river segment, and three national wildlife refuges are located in the watershed. Thirty-three rare plant and animal species have been documented in the watershed, including four rare fish species and two rare mussel species, and 1 rare amphibian species.

Chapter 1 of the Lower Hatchie River Watershed Water Quality Management Plan discusses the Watershed Approach and emphasizes that the Watershed Approach is not a regulatory program or an EPA mandate; rather it is a decision-making process that reflects a common strategy for information collection and analysis as well as a common understanding of the roles, priorities, and responsibilities of all stakeholders within a watershed. Traditional activities like permitting, planning and monitoring are also coordinated in the Watershed Approach.

A review of water quality sampling and assessment is presented in Chapter 3. Using the Watershed Approach to Water Quality, 551 sampling events occurred in the Lower Hatchie River Watershed in 2000-2005. These were conducted at ambient, ecoregion or watershed monitoring sites. Monitoring results support the conclusion that 51.2% of stream miles assessed fully support one or more designated uses.

A detailed description of the watershed can be found in Chapter 2. The Lower Hatchie River Watershed is approximately 1,461 square miles (1,448 mi<sup>2</sup> in Tennessee) and includes parts of seven Tennessee counties. A part of the Mississippi River drainage basin, the watershed has 2,530.8 stream miles in Tennessee.



*Water Quality Assessment of Streams and Rivers in the Tennessee Portion of the Lower Hatchie River Watershed. Assessment data are based on the 2004 Water Quality Assessment of 2,530.8 stream miles in the watershed.*

Also in Chapter 3, a series of maps illustrate overall use support in the watershed, as well as use support for the individual uses of Fish and Aquatic Life Support, Recreation, Irrigation, and Livestock Watering and Wildlife. Another series of maps illustrate streams that are listed for impairment by specific causes (siltation, pathogens, other habitat alterations).

Point and Nonpoint Sources are addressed in Chapter 4. Chapter 4 is organized by HUC-12 subwatersheds. Maps illustrating the locations of STORET monitoring sites and stream gauging stations are also presented in each subwatershed.

| HUC-10     | HUC-12                               |
|------------|--------------------------------------|
| 0801020801 | 080102080101 (Hatchie River)         |
|            | 080102080102 (Porters Creek)         |
|            | 080102080103 (Wade Creek)            |
|            | 080102080104 (Cub Creek)             |
|            | 080102080105 (Hatchie River)         |
|            | 080102080106 (Piney Creek)           |
|            | 080102080107 (Grays Creek)           |
|            | 080102080108 (Pleasant Run Creek)    |
|            | 080102080109 (Mill Creek)            |
|            | 080102080110 (Short Creek)           |
|            | 080102080111 (Clear Creek)           |
| 0801020802 | 080102080201 (Upper Spring Creek)    |
|            | 080102080202 (Lower Spring Creek)    |
| 0801020803 | 080102080301 (Lacy Creek)            |
|            | 080102080302 (Clover Creek)          |
| 0801020804 | 080102080401 (Hatchie River)         |
|            | 080102080402 (Muddy Creek)           |
|            | 080102080403 (Big Black Creek)       |
|            | 080102080404 (Hatchie River)         |
|            | 080102080405 (Jeffers Creek)         |
|            | 080102080406 (Bear Creek)            |
|            | 080102080407 (Poplar Creek)          |
|            | 080102080408 (Carter Creek)          |
|            | 080102080409 (Sugar Creek)           |
|            | 080102080410 (Hatchie River)         |
|            | 080102080411 (Little Muddy Creek)    |
|            | 080102080412 (Cypress Creek)         |
| 0801020805 | 080102080501 (Upper Big Muddy Creek) |
|            | 080102080502 (Lower Big Muddy Creek) |

The full Lower Hatchie River Watershed Water Quality Management Plan can be found at: <http://www.state.tn.us/environment/wpc/watershed/wsmplans/>

| HUC-10     | HUC-12                            |
|------------|-----------------------------------|
| 0801020806 | 080102080601 (Hatchie River)      |
|            | 080102080602 (Lagoon Creek)       |
|            | 080102080603 (Hatchie River)      |
|            | 080102080604 (Town Creek)         |
|            | 080102080605 (Hatchie River)      |
|            | 080102080606 (Mathis Creek)       |
| 0801020807 | 080102080701 (Upper Cane Creek)   |
|            | 080102080702 (Lower Cane Creek)   |
| 0801020808 | 080102080801 (Upper Indian Creek) |
|            | 080102080802 (Lower Indian Creek) |

*The Tennessee Portion of the Lower Hatchie River Watershed is Composed of thirty-nine USGS-Delineated Subwatersheds (12-Digit Subwatersheds).*

Point source contributions to the Tennessee portion of the Lower Hatchie River Watershed consist of twenty-one individual NPDES-permitted facilities, four of which discharge into streams that have been listed on the 2004 303(d) list. Other point source permits in the watershed (as of October 11, 2007) are Aquatic Resource Alteration Permits (49), Tennessee Multi-Sector Permits (32), Mining Permits (8), Ready Mix Concrete Plant Permits (5), and Water Treatment Plant Permits (2). Agricultural operations include cattle, hog, and sheep farming. Maps illustrating the locations of permit sites and tables summarizing livestock practices are presented in each subwatershed.

Chapter 5 is entitled *Water Quality Partnerships in the Lower Hatchie River Watershed* and highlights partnerships between agencies and between agencies and landowners that are essential to success. Programs of federal agencies (Natural Resources Conservation Service, U.S. Fish and Wildlife Service, U.S. Geological Survey, and U.S. Army Corps of Engineers), and state agencies (TDEC/State Revolving Fund, TDEC Division of Water Supply, Tennessee Department of Agriculture, West Tennessee River Basin Authority, and Mississippi Department of Environmental Quality) are summarized. Local initiatives of organizations active in the watershed (Friends of West Tennessee Refuges, Chickasaw-Shiloh RC&D Council, and The Nature Conservancy) are also described.

Point and Nonpoint source approaches to water quality problems in the Lower Hatchie River Watershed are addressed in Chapter 6. Chapter 6 also includes comments received during public meetings, links to EPA-approved TMDLs in the watershed, and an assessment of needs for the watershed.